Ex. 6 - Personal Privacy

Sent: Fri 6/7/2013 7:37:04 PM
Subject: Potential 2013 wild rice survey sites
Map of potential wild rice survey sites June 7 2013.pdf
Potential Wild Rice survey sites for 2013 June 7 2013.xls
Map codes of Potential Wild Rice survey sites for 2013 June 7 2013.pdf
Potential Wild Rice survey sites for 2013 June 7 2013.pdf

Hello all,

Attached is a map of sites that may be sampled during the 2013 field survey effort. Also included is an Excel file with two worksheets that include summary data that was considered when making site selections (the two worksheets are also included as pdf files). Please note that the data are still preliminary and may be revised.

The MPCA had originally proposed sampling some sites more intensively than the once-a-summer sampling regime that was pursued in 2011 and 2012: it was proposed to sample seven sites once a month for the five months from May through September. However, there were many suggestions for this intensive sampling, which made it very difficult to narrow the 2013 intensive effort to just seven sites. Because it appears that much is to be gained by characterizing seasonal changes from a wider variety of sites than seven sites would permit, the attached list proposes to sample 15 sites three times each, June, July, and August. In addition, there is an expanded list of 24 sites from which a subset of 10 to 20 will be sampled one time in July or August. Please note that the sites that will be sampled three times are numbered from 1 to 15, and the sites that will be sampled one time are numbered from 20 to 43. There are no sites numbered from 16-19.

We believe that collecting data for 15 sites in June, July, and August will adequately characterize trends at each site over the growing season of wild rice, particularly in 2013 when the growing season was delayed by 3 to 4 weeks because of an unusually late spring. Rice is expected to be mature by late August, so a September sampling would have simply documented any subsequent changes that are perhaps not critical to achieving an understanding of conditions that control wild rice growth.

A major effort has been made to select a variety of sites for the 2013 survey to fill in the overall database from 2011 and 2012, which is dominated by low-sulfate sites that successfully grow wild rice. Consequently, 2013 sites are dominated by higher-sulfate systems (above 10 mg/L sulfate) that may or may not successfully host wild rice, but have the potential for wild rice to grow successfully. Potential is documented by historical or recent observation of wild rice, or, at least the presence of white or yellow water lilies, which are taken as indicators of potentially favorable habitat for wild rice. Even though there is an emphasis on higher-sulfate systems for the 15 sites, for comparative purposes four low-sulfate sites have been chosen for repeated sampling over the 2013 growing season (Height of Land Lake, Little Round Lake, Rice Lake (Crow Wing County), and Eighteen Lake). In addition, field crews will attempt to re-sample a low-sulfate site in Sandy Lake, which is otherwise thought to be a high-sulfate system. On 9/21/2012 a wild rice survey was conducted near the outlet of Sandy Lake, yielding a surface water sulfate value of 3.07 mg/L, which is surprisingly low for that lake—a reconnaissance sample from the main basin on 5/22/2012 produced a sulfate value of 169 .0 mg/L. A possible explanation for the low sulfate value at the outlet is that the location may be influence by a stream that enters Sandy Lake from the North.

Note that not all of the sites identified for potential single-visit surveys will be sampled. For instance, wild rice was historically observed in one of the two basins of Lake Geneva, but field

crews will not decide which basin to sample until they have searched both for a wild rice bed to sample within. As at other sites, if they don't find wild rice, they will use a habitat indicator such as water lily plants to identify a sampling site.

In the attached Excel file, there is a field labeled "MPCA past survey(s)" which includes sample codes from surveys conducted during this wild rice study. Codes preceded by "FS" were surveys conducted in 2012; "P" codes indicate that the samples were collected as part of the preliminary field survey in 2011; "RE" codes indicate that only surface water samples were taken as part of a reconnaissance effort to characterize the sulfate concentration of a water body. Blank cells indicate that no sample was taken.

Pat

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